

To: McKim, Krista[mckim.krista@epa.gov]
From: Capuzzi, Kelly
Sent: Mon 10/21/2013 6:20:06 PM
Subject: RE: per our voicemail exchange

Krista

I asked Greg Lipps for information about potential impacts to the Hellbenders in Captina and this is what he sent to me which is from the 2013 Amphibians of Ohio as cited below:

"In addition to the slurry releases, permitted discharges from mining operations into Captina Creek have also resulted in conductivity and total dissolved solids (TDS) exceeding water quality standards (Ohio EPA 2010). During low-flow conditions (and corresponding to Hellbender breeding season), conductivity levels in the creek remained elevated to its confluence with the Ohio River, nearly 22 miles.

A reduction in TDS in Hellbender enclosures at the St. Louis Zoo correlated with the first successful captive reproduction of the species (Mark Wanner, pers. comm.). Increased osmolality of water has been correlated to decreases in fish sperm motility (Schoenfuss et al. 2009)."

Citation:

Lipps GJ Jr. 2013. Eastern Hellbender *Cryptobranchus alleganiensis alleganiensis* (Daudin 1803). pp. 187-208 in: Pfingsten, R.A., J.G. Davis, T.O. Matson, G. Lipps, Jr., D. Wynn, and B.J. Armitage (Editors). Amphibians of Ohio. Ohio Biological Survey Bulletin New Series. Volume 17 Number 1 xiv + 899 p.

Also note that to date we have only located Hellbender nests upstream of the (former) Perkins Run discharge site. The presence of adult Hellbenders should not necessarily be interpreted as evidence of no impacts from water pollution.

Greg

From: McKim, Krista [mailto:mckim.krista@epa.gov]
Sent: Friday, October 18, 2013 8:04 AM
To: Capuzzi, Kelly
Cc: Pellegrini, Janet
Subject: per our voicemail exchange

Hi Kelly!

Attached is the document I mentioned on the phone. It discusses some data collected from Captina and Piney. I was wondering what you think of some of these arguments relating to water quality in the creeks. Maybe we can set up a time to talk on Monday when you are back in the office. I have conflicts in the morning but am free in the afternoon.

Let me know if you would like to see any of the referenced appendices.

Have a great weekend!

Krista McKim, PE

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